

CLAIMS

What is claimed is:

1 1. A platform comprising:
2 a processor executing in one of a normal execution mode and an
3 isolated execution mode;
4 a system memory including an isolated area, an isolated output
5 area, and a non-isolated area; and
6 an output device.

1 2. The platform of claim 1 wherein the output device is a graphics
2 card.

1 3. The platform of claim 2 further comprising:
2 a memory control hub (MCH) coupled between the system memory,
3 and the processor and the graphics card, the memory control hub to permit the
4 graphics card to access the isolated output area only when the graphics card is in
5 isolated access mode.

1 4. The platform of claim 3 wherein the graphics card comprises:
2 a direct memory access (DMA) controller and wherein local storage
3 of the data from the isolated output area is not permitted.

1 5. The platform of claim 3 wherein only the graphics card is permitted
2 to read the isolated output area.

1 6. The platform of claim 1 further comprising:
2 an operating system (O/S) nub having a driver to write display data
3 into the isolated output area when the processor is executing in isolated
4 execution mode.

1 7. The platform of claim 3 further comprising:
2 a link between the graphics card and the MCH having an isolated
3 transaction type.

1 8. The platform of claim 3 wherein the MCH only permits the O/S
2 nub to write to the isolated output area.

1 9. The platform of claim 7 wherein the link is a secure accelerated
2 graphics port bus.

1 10. The platform of claim 2 wherein the graphics card comprises:
2 an isolated bit plane; and
3 a non-isolated bit plane.

1 11. The platform of claim 10 wherein the graphics card denies all
2 external access to the isolated bit plane.

1 12. A method comprising:
2 establishing an isolated execution environment having an isolated
3 execution mode; and
4 preventing access to output data by any requester not operating in
5 an isolated mode.

1 13. The method of claim 12 wherein establishing comprises:
2 segregating a system memory into an isolated output area and a
3 non-isolated area.

- 1 14. The method of claim 13 further comprising:
2 issuing an isolated direct memory access (DMA) request for display
3 data in the isolated output area from a graphics card; and
4 refreshing the display based on the display data.
- 1 15. The method of claim 13 wherein preventing comprises:
2 identifying if an isolated attribute is present in a request for access to
3 the isolated output area; and
4 denying the request if no isolated attribute is present.
- 1 16. The method of claim 13 further comprising:
2 loading data from the isolated output area into a bit plane on a
3 graphics card; and
4 denying all external access to the bit plane.
- 1 17. The method of claim 16 further comprising:
2 defining a first window for display of an image corresponding to the
3 bit plane; and
4 occluding all windows but the first window.
- 1 18. The method of claim 13 further comprising:
2 retrieving data from the isolated output area;
3 displaying an image corresponding to the data; and
4 occluding the image prior to a platform transitioning out of isolated
5 execution mode.
- 1 19. A platform comprising:
2 a processor executing in one of a normal execution mode and an
3 isolated execution mode;

4 a direct memory access (DMA) controller to issue requests for access
5 to an isolated output area;
6 a first interface coupled to the DMA controller to forward requests
7 to a memory control hub (MCH); and
8 a second interface coupled to the DMA controller to supply output data to an
9 output device.

1 20. The apparatus of claim 19 wherein the first interface is a secure
2 accelerated graphics port (AGP) and the output device is a display.

1 21. The apparatus of claim 19 wherein the DMA controller attaches an
2 isolated attribute to any isolated output area access request.

1 22. The apparatus of claim 19 wherein the second interface is an audio
2 interface.